

Object Oriented concept in Ruby

Talk to a Teacher

<http://spoken-tutorial.org>

National Mission on Education through ICT

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Learning Objectives

In this tutorial we will learn to use



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In this tutorial we will learn to use

- **classes**



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In this tutorial we will learn to use

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- **creating objects**



Learning Objectives

In this tutorial we will learn to use

- classes
- creating objects
- **different ways of defining methods in Ruby**



System Requirements

Here we are using



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- **Ubuntu version 12.04**



System Requirements

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- Ubuntu version 12.04
- **Ruby 1.9.3**



Prerequisites

To follow this tutorial, you must have



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To follow this tutorial, you must have

- **Internet Connection**



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- Knowledge of Linux commands, Terminal and Text-editor



Prerequisites

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- If not, for relevant tutorials, please visit <http://spoken-tutorial.org>



Ruby's Object Oriented Nature

- **Ruby is an object oriented language.**



Ruby's Object Oriented Nature

- Ruby is an object oriented language.
- **Everything in Ruby is an object; from a value to a string or number.**



What is a Class in Ruby?

- **A class is a collection of related data and functions.**



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- It can serve to keep information organized.



What is a Class in Ruby?

- A **class** is a collection of related data and functions.
- It can serve to keep information organized.
- An **object** is an instantiation of a class .



Defining a class in Ruby

- **A class definition begins with the keyword class.**



Defining a class in Ruby

- A **class** definition begins with the keyword **class**.
- It is followed by the name of the **class**.



Defining a class in Ruby

- A **class** definition begins with the keyword **class**.
- It is followed by the name of the **class**.
- It is delimited with an **end**.



A class in Ruby

- Here is how you would write a class in Ruby:



A class in Ruby

- Here is how you would write a **class** in Ruby:



A class in Ruby

- Here is how you would write a **class** in Ruby:

```
class Product
  ruby code
end
```



A class in Ruby

- Here is how you would write a **class** in Ruby:

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end
```

- **The name of the class must begin with a capital letter.**



Classes in Ruby contd...

- **Names that contain more than one word should be camelcased**



Classes in Ruby contd...

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Classes in Ruby contd...

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- **For example:**



Classes in Ruby contd...

- Names that contain more than one word should be camelcased
- For example:
- **1) UserInformation**



Classes in Ruby contd...

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 - 1) `UserInformation`
 - 2) `ProductInformation`



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 - 1) `user_information.rb`



Classes in Ruby contd...

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- For example:
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 - 2) `product_information.rb`



What is an object?

- **An object is an instance of a class.**



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How do you declare an object?

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- **Here an object gets created.**



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Declaring an object in Ruby

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- Here an **object** gets created.
- `product = Product.new`
- This process is called initialization of an **object**.
- **This object is of type : Product.**



Objects and the initialize method

- Now let us look at what an initialize method is.



Objects and the initialize method

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Objects and the initialize method

- Now let us look at what an initialize method is.
- An initialize method is called at the time of **object** creation.
- **On calling "new" on an object we invoke the initialize method.**



The initialize method

- **An initialize method may take a list of parameters.**



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- **Let us look at an example.**



Defining methods in a class

- Recall that in Ruby, methods are the functions that a **class** performs.



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- **A multiword method name is separated with an underscore.**



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Defining methods in a class

contd...

- **Some of the characters that can be appended to a method name are:**



Defining methods in a class

contd...

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Defining methods in a class

contd...

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Defining methods in a class

contd...

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Defining methods in a class

contd...

- Some of the characters that can be appended to a method name are:
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- Each of the characters add some meaning to the method.



Defining methods in a class

contd...

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- ?
- =
- Each of the characters add some meaning to the method.
- **Let us look at some examples.**



Summary

In this tutorial we have learnt:

- How to declare **classes**
- How to create **objects** of a **class**
- Different ways of defining methods in Ruby



Assignment

As an assignment

- Define a class **Product**



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- Define methods that you can use get values of myvar and set values for myvar.



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- **To set values define the method using = sign.**



Assignment

As an assignment

- Define a class **Product**
- Define methods that you can use get values of myvar and set values for myvar.
- To set values define the method using = sign.
- **Instantiate the object of the class and set and get values using the above 2 methods.**



About the Spoken Tutorial Project

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Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, please write to contact@spoken-tutorial.org



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- More information on this Mission is available at <http://spoken-tutorial.org/NMEICT-Intro>

